Dynamic architecture, rotating tower: yes, but will it fly?

For the past two years, David Fisher has made a name for himself by building towers in the sky. Literally.

For, despite the earthly icons he’s received for his architectural concept (Time Magazine Best Invention award in 2008 and a citation as Best Architect in 2008 by the Trump-supported Florida-based Developers and Builders Alliance), so far the 80-storey 1,300-foot tower exists solely in his lofty imagination. It’s been there for a while.

“I guess it all started when I was five years old,” says the 60-something Israeli-born Florence-based architect. “My mother used to take me to see the sunset every evening over the Mediterranean and I would sit there and have my dinner and watch the red sun going slowly into the water. This is when I started to think about movement – one day is going away, another is coming – and I started thinking about time. And I started thinking later, as an architect, that life changes, everything changes … but buildings don’t change; homes don’t change.”

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and put it on a computer that I began to understand
that if I were to rotate every floor independently,
that the building would actually change shape
continuously."

Indeed, the tower in animation looks like a 3-D
barber’s pole, undulating non-stop from the ground
into the clouds. The floors rotate around a centre
core, covering a vertical distance of around six
kilometers a day – or up to some 2,000 kilometres
per year. Technically, the activation and speed of
each floor can be controlled by the apartment owner
through a voice-activated password. Or, in the case
of more than one unit per floor, by the architect or
building manager.

And that opens up a whole can of aesthetic worms:
who controls the shape of the building as it sits in the
real world? Is this a zoning matter? A city planning
agenda item? A political pickle? An exercise in
democracy?

"The building will be shaped by life and designed
by time," says Fisher. "It’s everybody who will be
able to shape the building. An architect 300 years
from now will be able to re-shape it the way he
wants it."

Lofty words from someone who admits to not having
practised architecture for the past 20 years and who
has never built a skyscraper before designing this
one. These were the bases for a media-bashing in
June of last year in New York when Fisher first
presented his Dynamic Tower to the world.
Questions arose about his competency, the real
functionality of the building, and the cost.

How, for example, is the plumbing constructed for a
building that’s in constant motion and tied to a
central column? “It’s like the refueling of an aircraft
in flight,” answers Fisher. “The toilets and water
systems shut off periodically while the aircraft (read
‘apartment’) is in motion.”

Okay, so what powers the building and makes the
floors spin? “Horizontal turbine engines,” he says.
“One under each floor. So for the 80-storey tower,
there are 79 horizontal turbine engines.” But so far
such turbine engines do not exist, and past business
practice suggests engineering research for such
limited issue would be difficult to jump-start at a
reasonable price.

That brings up the issue of the $700 million
construction cost. Fisher’s pockets are not deep, and
he has indicated customer deposits would constitute
a large part of his operating funds. So who is on his
potential customer list? “Very wealthy people” says
Fisher, without missing a beat. “There are still
plenty of them around. This will be a very luxurious
building.” The cost per unit? “From 3 million to 30
million dollars,” he says. That’s about a million-
dollar price drop at both ends of the spectrum from
his initial announcement last year – before the
economic crisis hit - when he told a media gathering
he was certain of the imminent construction of
Dynamic Towers, first in Dubai and then in Moscow.
Now it’s the UAE, with construction to start by the
autumn – both on-site and at a factory in Bari in
southern Italy.

While the first tower(s) will be expensive, in the way
of all prototypes, the next generations could be
much less so, because this Dynamic rotating
domineering Tower is pre-fabricated. “I call it ‘pre-
assembled,’” he says, “because today ‘pre-
fabricated’ means concrete beams. This will be like
producing a car – you make the parts and then you
assemble it in one place. This means lower costs,
fewer workers: 90 workers instead of 200. In the
future, all homes will be built like this – in a factory
and then assembled."

That means Fisher’s future customers could be
different from the rich clients he’s looking to sign on
the dotted line today. "My ideal customer in the
future is the man who cannot afford a home today,
because tomorrow he will be able to buy one of
these."

It seems to the lay onlooker that a gyrating, rotating
80-storey tower would use up a lot of energy and
demand a lot of maintenance – not popular in these
days when “less” is de rigeuer. “The building will
be energy positive,” claims Fisher. “The turbine
engines underneath each floor (that is, the engines
that have yet to be invented) will create enough
energy to power the whole building. And … 15 per
cent of each unit will be exposed to the sun at all
times, so we will have energy through photovoltaic
cells on the roof of each floor."

Yes, but will it see the light of day? On an
engineering level, the structural engineer on the NY
World Trade Towers and Shanghai World Financial
Center, Leslie Robertson, told reporters last year
that Fisher’s Dynamic Tower is “absolutely
buildable. You can build anything.”

Then there’s the financial structure in an
unfathomable recession. Fisher continues to focus
on the long-term horizon: “I believe it will be easier
to sell such a building because it is so unique,” he
claims. “And besides ... I like challenges.”

David Fisher was a speaker at the 7th World
Investment Conference at La Baule, held June 3-5.